PS-LX120D

SERVICE MANUAL

US Model

- PS-LX120D is similar to the earlier PS-LX100 (US model).
- Refer to the PS-LX100/LX285 service manual for information not contained in this service manual.

PARTS LIST (The difference between PS-LX100 and PS-LX120D)

PS-LX100			PS-LX120D	
Page	No.	Part No.	Part No.	Description
	6	————	4-895-830-01	SPINDLE ASSY
	34	4-895-493-01	————	SPINDLE
6, 7	10	4-896-353-01	4-896-543-01	CABINET, MAIN
	17	————	X-4895-412-1	COVER ASSY, DUST
	26	————	4-896-321-01	HINGE ASSY
	27	————	4-896-322-01	STOPPER, DUST COVER
		3-786-002-21	3-753-171-21	MANUAL, INSTRUCTION
		*4-896-319-11	*4-944-580-01	INDIVIDUAL CARTON
8		*4-896-309-01	*4-896-307-01	CUSHION(R)
		*4-896-310-01	*4-896-308-01	CUSHION(L)

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

STEREO TURNTABLE SYSTEM

SONY®

English
91F1632-1
Printed in Japan
©1991.6
Published by Customer Relations and Service Group

9-956-612-11

Sony Corporation
Audio Group

PS-LX100/LX285

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model
PS-LX100

US Model
Canadian Model
E Model
Italian Model
PS-LX285

Photo: PS-LX285.

PS-LX285: This set is the turntable system section in SEN 280.

SPECIFICATIONS

Turntable

Platter	30cm (12 in.) US model: Plastics Others: aluminium-alloy diecast
Motor	DC servo motor
Drive system	Belt-drive
Speed	33⅓ rpm, 45 rpm
Signal-to-noise ratio	65dB (DIN-B)
Automatic system	Return, reject
Tonearm type	Statically balanced

Cartridge

Type	Moving magnet type
Stylus	Sony ND-155G (0.6 mil diamond)
Dimensions	US model: Approx. 430x95x350mm (w/h/d) (17x3¾x13⅞ inches) Others model: Approx. 430x105x350mm (w/h/d) (17x4¼x13⅞ inches)
Weight	US model: Approx. 2.5kg (5lb 9oz) net Others model: Approx. 3.3kg (7lb 5oz) net

Power Requirement (PS-LX100 model only)

US, Canadian model: 120V AC, 60Hz
AEP model: 220V AC, 50/60Hz
UK model: 240V AC, 50/60Hz
E model: 110–120 or 220–240V AC adjustable, 50/60Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

STEREO TURNTABLE SYSTEM

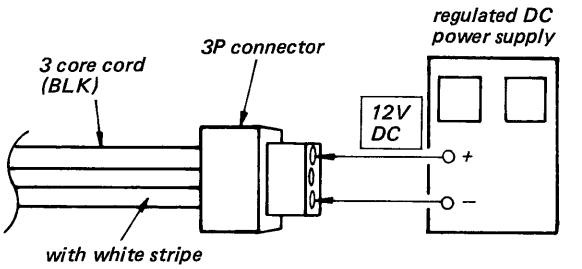
SONY®

LX285 Model only

REPEAIRING PRECAUTION

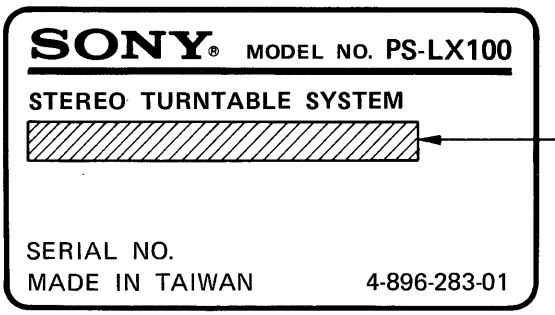
[To supply B+ voltage]

The power of this unit is fed from TA-AX285. Because of this, connect the regulated power supply as illustrated right when this unit alone operates.



MODEL IDENTIFICATION

– Specification Label –



PS-LX100 Model only:

US, Canadian model: AC 120V 60Hz 4W
AEP model: AC 220V 50/60Hz 2W
UK model: AC240V 50/60Hz 2W
E model: AC 110 – 120/220 – 240V 50/60Hz 4W

PS-LX100 Model only

SAFETY CHECK-OUT (US, Canadian Model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

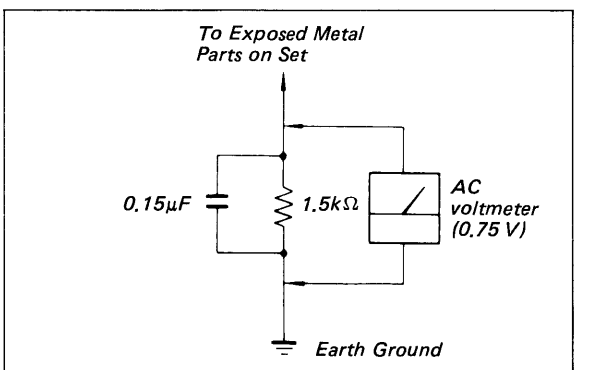
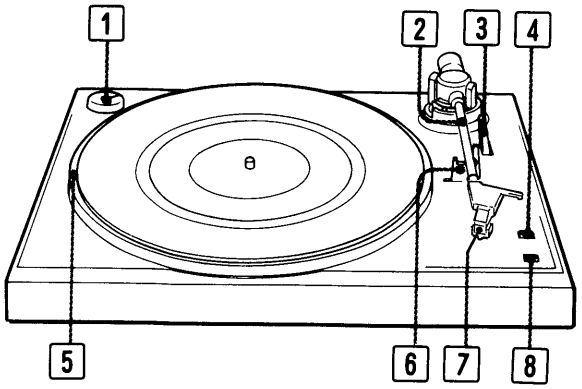


Fig. A. Using an AC voltmeter to check AC leakage.

LOCATION AND FUNCTION OF CONTROLS



1 45-rpm adaptor

2 Tonearm

3 ▼/▼ (cueing) lever
Used to lift or lower the tonearm.

4 REJECT button
To stop during play, press this button.

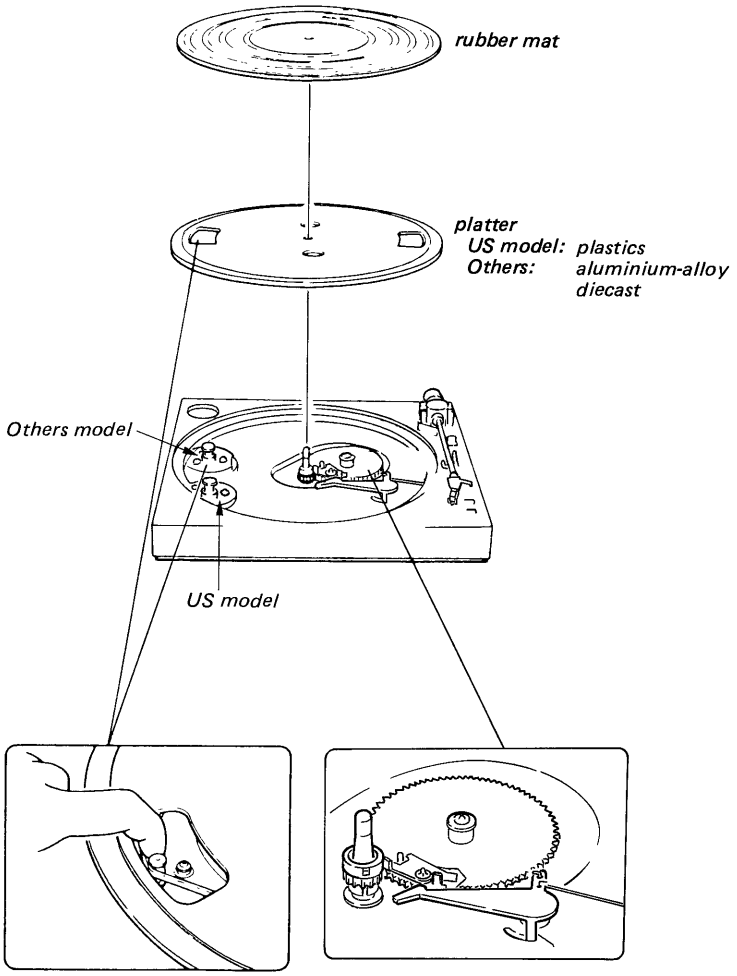
5 Turntable platter

6 Arm rest

7 Cartridge

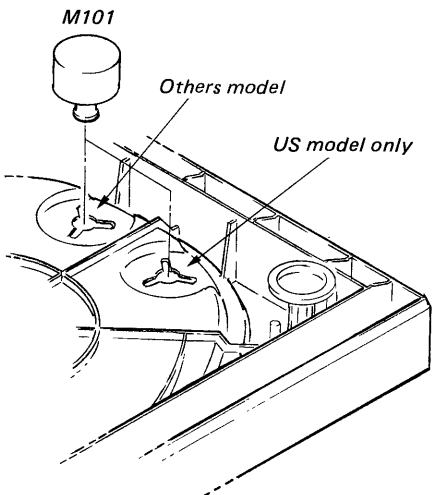
8 SPEED selector
For 45-rpm records, depress the selector. For 33-rpm records, press it again.

TURNTABLE ASSEMBLY



Hook the belt on the motor pulley.
If the belt come off from the platter, replace it with the glossy side outward.

SERVICING NOTE



SECTION 1
ADJUSTMENTS

Speed Adjustment

Note: Be sure to perform 33-rpm adjustment before 45-rpm.

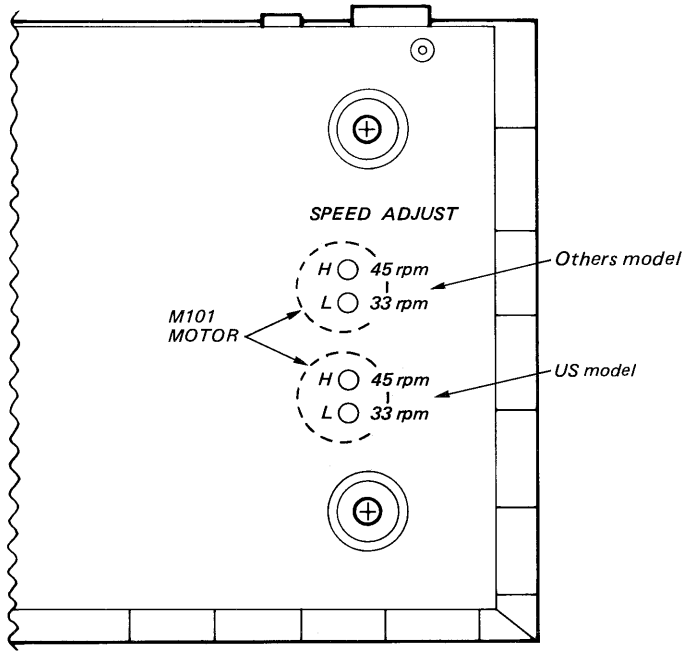
– Using a stroboscope board –

1. Put a stroboscope board on the mat.
2. Set the SPEED switch to 33.
   Depress the lifter knob to make a lift-up mode and move the arm above to the outer most groove of a record.
   Adjust M101(L) so that the striped pattern of stroboscope board is stationary.
3. Set the SPEED switch to 45.
   Adjust M101(H) in the same way.

– Using a test record –

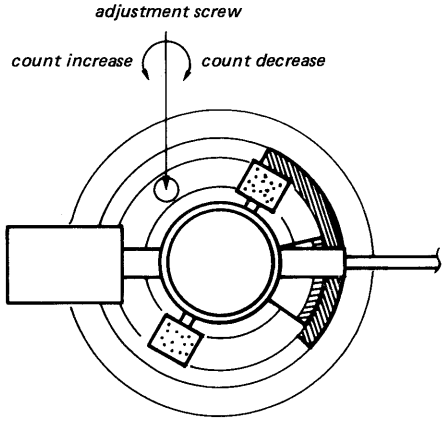
1. Put a test record (YFSC-16) on the mat.
2. Move the arm onto a-2 (3kHz) section and trace it.
3. Adjust M101(L) so that the frequency is 2,991 – 3,009Hz.
4. Set the SPEED switch to 45.
   Adjust M101(H) so that the frequency is 4,038 – 4,062Hz.

Adjustment Location:



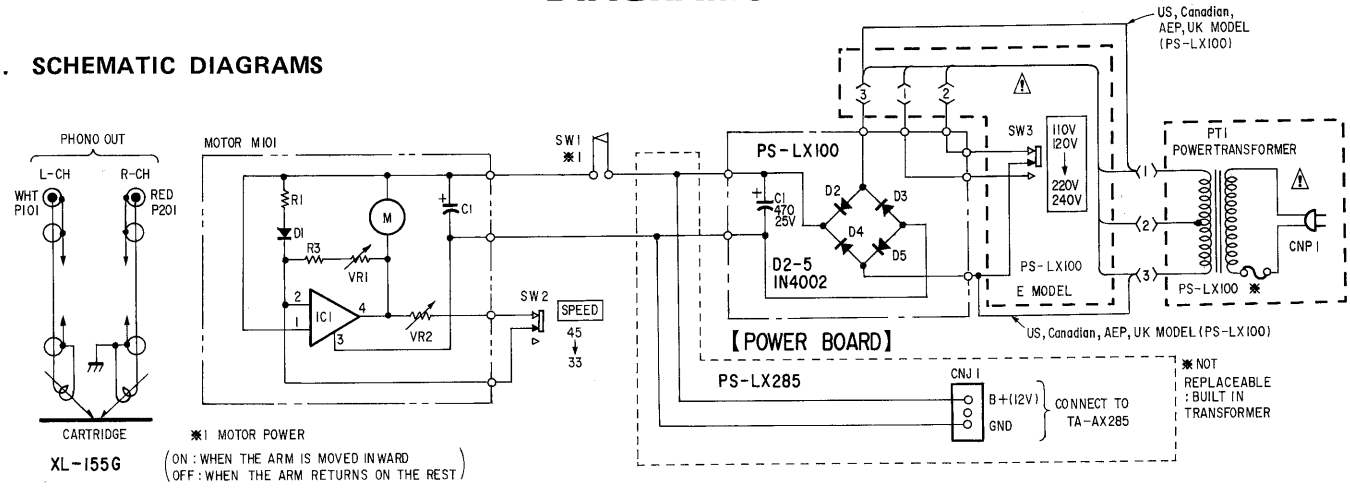
Automatic Return Position Adjustment

1. Put a test record (YFSC-16) on the mat.
2. Set the SPEED switch to 33 and move the tonearm on a return check groove.
3. Turn the Adjustment screw so that the tonearm starts to return at count of 4 – 10.



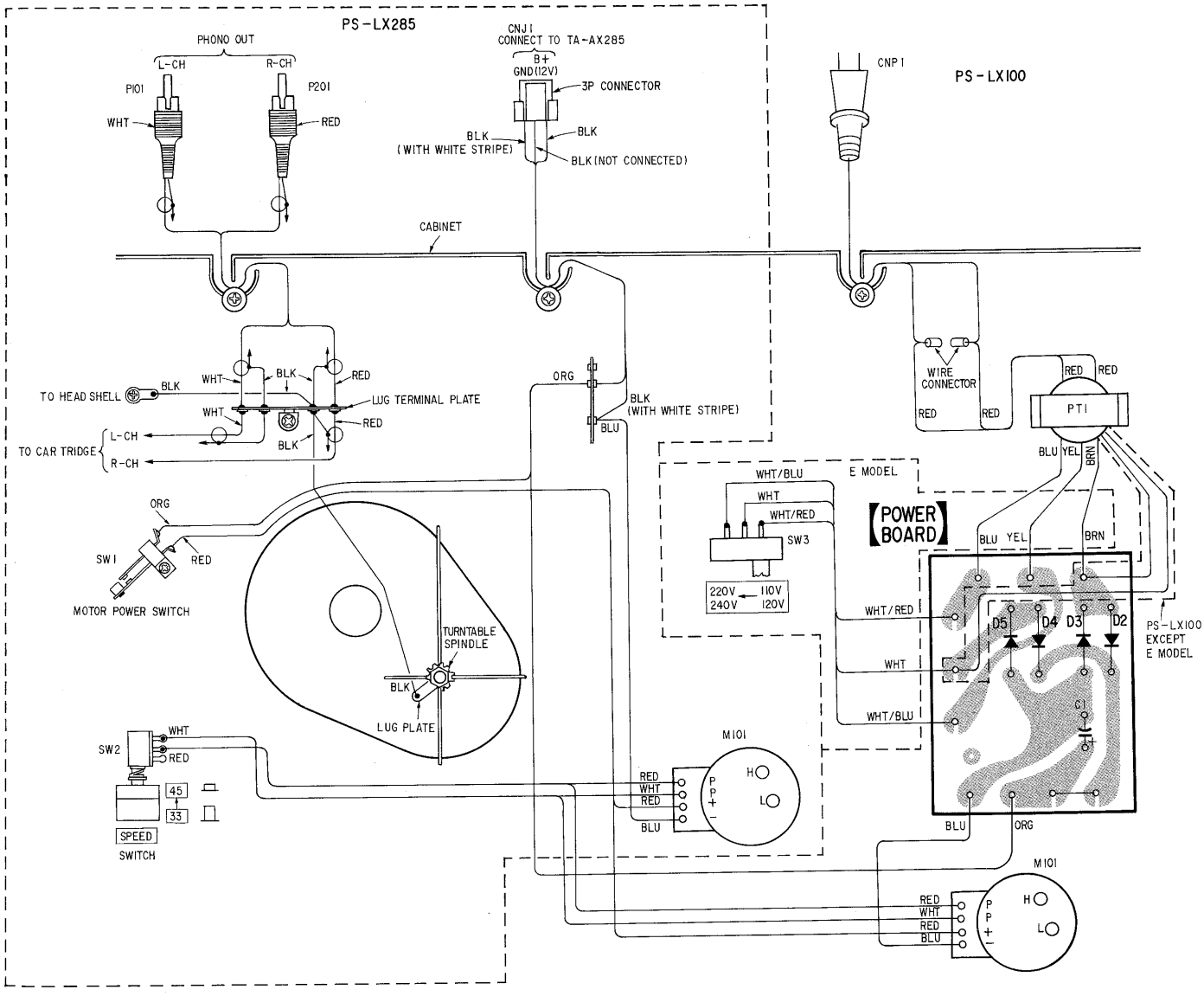
SECTION 2
DIAGRAMS

2-1. SCHEMATIC DIAGRAMS



Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

2-2. PRINTED WIRING BOARDS



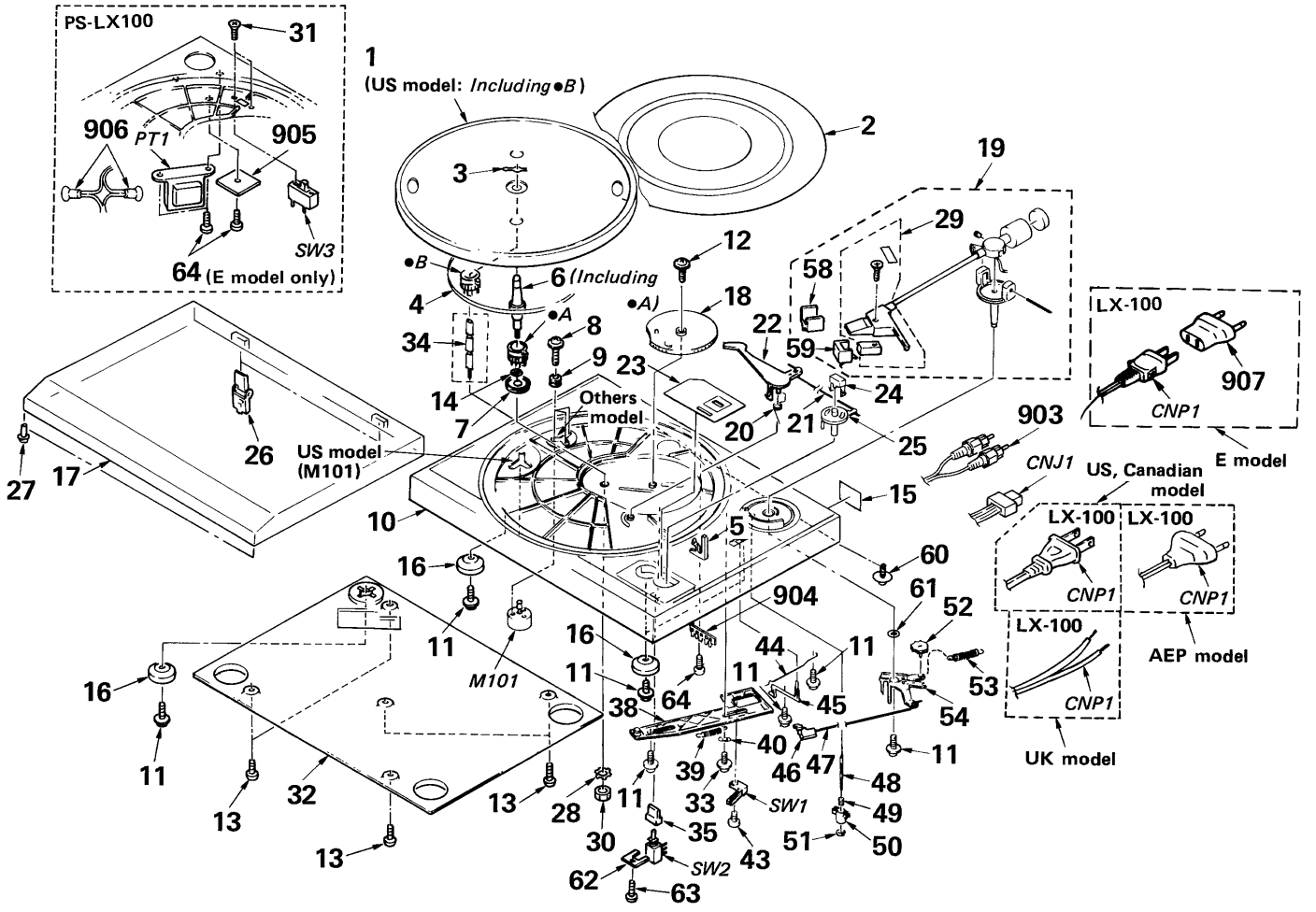
SECTION 3
EXPLODED VIEW AND PARTS LIST

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ ↑
  Cabinet's Color Parts' Color

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifé.



Note IT: Italian

No.	Part No.	Description	Remarks
1	4-909-060-01	TURNTABLE	
	4-895-491-01	(US)...TURNTABLE, GEAR	
2	4-877-807-11	SHEET, TURNTABLE	
	4-895-496-01	(US)...MAT, TURNTABLE	
3	4-895-490-01	(US)...CLIP, SPINDLE	
4	4-895-492-01	BELT	
5	*4-896-298-01	REST, ARM	
6	4-895-830-01	(EXCEPT US)...SPINDLE ASSY	
7	*4-895-404-01	SPINDLE WASHER	
8	4-895-413-01	SCREW	
9	4-895-414-01	GROMMET (A)	
10	*4-896-300-01	(LX285)...CABINET, MAIN	
	*4-896-330-01	(LX100)...CABINET, MAIN	
11	4-895-430-01	SCREW (7-BID 3008 ZN3A 12D)	
12	4-896-294-01	SCREW (7-BID 3006 ZN3A 10D)	
13	7-685-647-79	SCREW +BTP 3X10 TYPE2 N-S	
14	4-895-024-01	(LX100,LX285:US)...POLY WASHER	
15	*4-896-282-01	(LX285).....LABEL, MODEL NUMBER (U2)	
	*4-896-283-01	(LX100:US,Canadian) ...LABEL, MODEL NUMBER (U2)	
	*4-896-284-01	(LX100:AE2)...LABEL, MODEL NUMBER (AE2)	
	*4-896-285-01	(LX100:UK)....LABEL, MODEL NUMBER (UK)	
	*4-896-286-01	(LX100:E).....LABEL, MODEL NUMBER (E)	
	*4-896-287-01	(LX100:AE1)...LABEL, MODEL NUMBER (AE1)	
16	4-895-435-01	FOOT	
17	X-4895-412-1	(LX100:Canadian,AEP,UK,E, LX285:Canadian,E,IT)...COVER ASSY, DUST	
18	4-895-495-01	GEAR, CAM, CLUTCH	
19	X-4895-411-1	ARM ASSY	
20	4-895-850-01	SPRING, REJECT	
21	*4-895-836-01	WIRE, REJECT	
22	*4-895-837-01	LEVER, REJECT	
23	4-896-311-01	PANEL, FUNCTION	
24	4-895-839-01	BUTTON, REJECT	
25	*4-895-840-01	HOLDER, REJECT	
26	4-896-321-01	(LX100:Canadian,AEP,UK,E,LX285:Canadian, E,IT)...HINGE ASSY	
27	4-896-322-01	(LX100:Canadian,AEP,UK,E,LX285:Canadian, E,IT)...STOPPER, DUST COVER	
28	4-895-443-01	W GEAR 0003 ZN3A	
29	4-896-320-01	HEAD ASSY, PU	
30	4-895-445-01	NUT 50 ZN3A	
31	7-621-773-95	(LX100:E)....SCREW +B 2.6X6	
32	*4-896-299-01	CABINET, LOWER	
33	7-685-648-79	(LX100)...SCREW +BTP 3X12 TYPE 2	N-S
34	4-895-493-01	(US)...SPINDLE	
35	4-895-802-01	BUTTON, SPEED	
38	*4-895-804-01	ARM, SLIDE	
39	4-896-302-01	SPRING, SLIDE	
40	4-895-807-01	WASHER	
43	7-685-104-19	SCREW +P 2X6 TYPE2 SLIT	
44	*4-895-808-01	ROD, CUE	
45	4-895-809-01	LEVER, CUE	
46	*4-896-304-01	LEVER, TRIP	
47	*4-896-305-01	ROD, TRIP	
48	*4-895-812-01	SHAFT, LIFT	
49	4-895-813-01	SPRING, LIFT	
50	4-895-814-01	FORK, LIFT	
51	7-624-104-04	STOP RING 2.0, TYPE -E	
52	4-895-818-01	CAM, ADJUSTMENT	
53	4-895-819-01	SPRING, ADJUSTMENT	
54	4-895-817-01	LINK, RETURN	
58	4-895-474-01	CARTRIDGE COVER	
59	1-549-132-11	STYLUS (ND-155D)	
60	4-896-293-01	SCREW ASSY	
61	4-896-296-01	WASHER, POLYETHYLENE	
62	*4-896-297-01	HOLDER, SWITCH	
63	7-685-535-19	SCREW +BTP 2.6X10 TYPE2 N-S	
64	7-685-646-79	SCREW +BTP 3X8 TYPE2 N-S	
903	1-558-595-11	CORD, CONNECTION (P101,P201)	
904	7-623-512-01	LUG TERMINAL 1L4P	
905	*4-896-325-01	(LX100)...PC BOARD, POWER	
906	⚠*4-896-338-01	(LX100)...WIRE, CONNECTOR (AC CONNECTION)	
907	⚠.1-526-565-12	(LX100:E)...AC PLUG ADAPTOR	
CNJ1	1-558-596-11	(LX285)...CORD, CONNECTION (3 CORE) (SYSTEM CONTROL)	
CNP1	⚠.1-558-945-11	(LX100:US,Canadian)...CORD, POWER	
CNP1	⚠.1-558-944-11	(LX100:AEP).....CORD, POWER	
CNP1	⚠.1-558-946-11	(LX100:UK).....CORD, POWER	
CNP1	⚠.1-551-472-23	(LX100:E).....CORD, POWER	
M101	4-896-306-01	CASE, MOTOR	
PT1	⚠.1-449-392-11	(LX100:US,Canadian)...POWER TRANSFORMER	
PT1	⚠.1-449-393-11	(LX100:AEP).....POWER TRANSFORMER	
PT1	⚠.1-449-394-11	(LX100:UK).....POWER TRANSFORMER	
PT1	⚠.1-449-395-11	(LX100:E).....POWER TRANSFORMER	
SW1	4-896-303-01	SELECTION, LEAF (POWER)	
SW2	4-896-301-01	SELECTION, PUSH (SPEED 33/45)	
SW3	⚠.1-571-083-11	(LX100:E)...SLIDE (VOLT SELECTION)	

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

SECTION 4
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description
903	1-558-595-11	CORD, CONNECTION (P101,P201)
904	7-623-512-01	LUG TERMINAL 1L4P
905	*4-896-325-01	(LX100)...PC BOARD, POWER
906	⚠*4-896-338-01	(LX100)...WIRE, CONNECTOR (AC CONNECTION)
907	⚠.1-526-565-12	(LX100:E)...AC PLUG ADAPTOR
C1	1-124-480-51	(LX100)...ELECT 470MF 25V
CNJ1	1-558-596-11	(LX285)...CORD, CONNECTION (3 CORE) (SYSTEM CONTROL)
CNP1	⚠.1-558-945-11	(LX100:US,Canadian)...CORD, POWER
CNP1	⚠.1-558-944-11	(LX100:AEP).....CORD, POWER
CNP1	⚠.1-558-946-11	(LX100:UK).....CORD, POWER
CNP1	⚠.1-551-472-23	(LX100:E).....CORD, POWER
D2	8-719-200-02	(LX100)...DIODE 10E2
D3	8-719-200-02	(LX100)...DIODE 10E2
D4	8-719-200-02	(LX100)...DIODE 10E2
D5	8-719-200-02	(LX100)...DIODE 10E2
M101	4-896-306-01	CASE, MOTOR
PT1	⚠.1-449-392-11	(LX100:US,Canadian)...POWER TRANSFORMER
PT1	⚠.1-449-393-11	(LX100:AEP).....POWER TRANSFORMER
PT1	⚠.1-449-394-11	(LX100:UK).....POWER TRANSFORMER
PT1	⚠.1-449-395-11	(LX100:E).....POWER TRANSFORMER
SW1	4-896-303-01	SELECTION, LEAF (POWER)
SW2	4-896-301-01	SELECTION, PUSH (SPEED 33/45)
SW3	⚠.1-571-083-11	(LX100:E)...SLIDE (VOLT SELECTION)

ACCESSORY & PACKING MATERIAL

3-550-458-01	(LX100:E)...LABEL, CAUTION, POWER SELECTOR A
3-703-450-01	(LX100:US)...INSTRUCTION
3-703-079-21	(LX100:UK)...LABEL, CAUTION (BACK)
3-786-002-11	(LX100:AEP,UK,E).....MANUAL, INSTRUCTION
3-786-002-21	(LX100:US,Canadian)...MANUAL, INSTRUCTION
3-786-002-31	(LX100:Canadian).....MANUAL, INSTRUCTION
3-786-002-41	(LX100:AEP).....MANUAL, INSTRUCTION
*4-895-829-01	PLATE, CONTROL, SPEED
4-895-846-01	POLYETHYLENE BAG
4-895-847-01	HOLDER, TURNTABLE
4-895-848-01	PLATE, TOP
4-895-481-01	(LX100)...ADAPTOR, 45
*4-896-307-01	(LX100:Canadian,AEP,UK,E,LX285:E) ...CUSHION (RIGHT)
*4-896-309-01	(LX100:US,LX285:US)...CUSHION (RIGHT)
*4-896-308-01	(LX100:Canadian,AEP,UK,E,LX285:E) ...CUSHION (LEFT)
*4-896-310-01	(LX100:US,LX285:US)...CUSHION (LEFT)

9-953-147-11

Sony Corporation
Audio Group

English
88D0696-1
Printed in Japan
© 1988.4
Published by A/V Enginnering Service Dept.

PS-LX100/285

SONY®
SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model

CORRECTION-1

Correct your service manual as shown below.

☛ : indicates corrected portion.

	INCORRECT	CORRECT
7	Ref. No. Part No. Description Remarks • • • • • • • • • • • • 905 4-896-325-01 (LX100)··· PC BOARD, POWER	Ref. No. Part No. Description Remarks • • • • • • • • • • • • 905 4-896-339-01 (LX100)··· PC BOARD, POWER

9-953-147-91

Sony Corporation
Audio Group

English
92K0699-1
Printed in Japan
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